



Contents lists available at ScienceDirect

JPRAS Open

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Original Article

Pearls for Starting a Headache Surgery Practice in Academic and Private Practice

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ARTICLE INFO

Article history:

Received 28 November 2023

Accepted 3 December 2023

Available online 10 December 2023

Keywords:

Headache surgery

Nerve decompression surgery

Refractory headache

Practice

ABSTRACT

There has been a growing body of evidence indicative of the effectiveness of headache surgery in treating patients with refractory headache disorders. The American Society of Plastic Surgeons issued a Policy Statement in 2018 stating that peripheral nerve decompression surgery for the treatment of refractory chronic headache disorders in select patients is considered a standard of care treatment. This endorsement sparked the interest of numerous plastic surgeons into initiating their own headache surgery practices. However, establishing a headache surgery clinic introduces challenges and considerations. This report outlines the key pillars for launching a successful headache surgery practice in academic and private practice environments.

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Introduction

Headache disorders (HDs) are a persistent burden on the US healthcare system and affect approximately 60% of the US population.¹ HDs have a substantial impact on the patients' daily activities, work–life balance, financial status, and emotional well-being.² Treatment and prevention of HDs has proven to be difficult with at least one unmet treatment need reported by 58% of patients on preventative medication.³ Growing evidence suggests that extracranial nerve compression is a trigger for HDs in patients who present with nerve pain patterns and those who demonstrate significant symptom relief following botulinum toxin injections or nerve blocks.^{4,5,6} Surgical decompression of peripheral nerves has been an effective treatment modality for patients in this category.^{7–9} In fact, the American Society of Plastic Surgeons (ASPS) released a Policy Statement in 2018, in which peripheral nerve decompression surgery was considered a standard of care for the treatment of refractory HDs in select patients.¹⁰ Generally, this would include patients who have failed trials of preventative medication from at least two of the four drug classes such as beta-blockers (e.g., metoprolol, propranolol), antidepressants (e.g., amitriptyline, nortriptyline, or sertraline), and antiepileptics (e.g., topiramate), where the prophylactic drug was administered at a maximally tolerated dose for at least 2 months.^{11,12}

Although introducing a new procedure often has its own set of challenges, treating patients with chronic nerve pain requires deep commitment and adaptations within practice. Nevertheless, the fulfillment a surgeon receives from alleviating a patients' pain and enhancing their quality of life is immeasurable.

Drawing from the authors' expertise, this report highlights the key pillars, considerations, and challenges involved in establishing a headache surgery practice within an academic setting and in a private practice context.

Pillars

Education

For those seeking to start a headache surgery clinic, a thorough understanding of the literature is critical to select the right patients and perform the best operation for each patient. The field of headache surgery has been around for more than 2 decades. Consequently, multiple written and audiovisual sources are available with which physicians have to become familiar. This and other journal have published articles, including the foundational work by Dr. Bahman Guyuron that culminated in his landmark randomized controlled trial.⁹ Other studies have detailed the anatomy of affected nerves and suggested surgical modifications.^{13–16} Additionally, two textbooks were published in the last few years that comprehensively covered different surgeries and patient evaluation in detail.^{17,18} Finally, the ASPS and its affiliate, the Migraine Surgery Society (MSS), provide multiple resources for continuous education of novice and accomplished surgeons, including live cadaver and online courses.¹⁹ The MSS has also established mentorship programs to help interested surgeons in connecting with expert surgeons to observe their clinic flow and operative setup firsthand. Furthermore, identifying a mentor with experience in this field is vital to circumvent pitfalls. Seeking their guidance on the myriad of questions that arise while embarking on this challenging journey is essential. Ideally, surgeons should select a mentor in their general area who can understand the medical community and provide guidance regarding negotiations with payors and writing appeals.

Building bridges: do not burn them

When starting a headache surgery practice in either an academic institution or a private practice, establishing strong collaboration with neurologists, pain management doctors, primary care providers, neurosurgeons, and spine surgeons is critical. It is important to spend time educating these specialists about the surgical procedure and HD types that can be treated using surgery. Additionally, reading about surgical and current medical approaches for HDs will help understand how medical doctors approach these conditions, which will allow plastic surgeons to interact with them in a familiar way. Working with neurologists, pain management doctors, and primary care physician will ensure that

patients will trial conservative treatment prior to surgery and that patients are referred for surgery without delay.

Moreover, at academic institutions, establishing a multi-disciplinary team would allow a surgeon to integrate headache surgery into the standard of care of patients with HDs. The physician liaison office at the home institution is an important asset to help reach out to community providers and create a platform for communicating with the physician groups. Establishing a good relationship with neurologists, neurosurgeons, primary care practitioners, physical therapists, pain specialists, and emergency medicine physicians in the home institution fosters a team approach and builds the patient referral system. It is key that these providers understand that surgery may be beneficial for patients with chronic intractable HDs refractory to traditional medications.

For private practitioners, this multi-disciplinary team is often not available and attracting patients with HDs can be challenging. However, considering the global prevalence of HD, several plastic surgeons may already be treating individuals in their practice primarily as aesthetic or reconstructive clients. Therefore, a simple way to inquire about HD symptoms is to enquire about any intake form during any patient interaction.

Patient selection

Structured preoperative and postoperative management of headache surgery patients creates reliable outcomes and a successful practice. Evaluation and management through neurology, pain management, and primary care prior to initial consultation can be helpful to evaluate the eligibility of a patient for surgery. Surgery should be offered to those with severe HD with well-defined pain patterns, pain sketches matching that of a sensory nerve pathway, and specific tenderness upon palpation of these nerves.^{12,20,21} Additionally, symptom improvement following local anesthetic nerve blocks and/or botulinum toxin injections is a reliable predictor of successful surgery.^{5,22} Multiple exclusion criteria include diffuse pain, inconclusive change of HD pattern, and co-existing medication overuse. HDs and contraindications for elective surgery could shift the patient away from candidacy for surgery.¹⁷ A detailed discussion regarding risks and expected outcomes with the patient should occur prior to scheduling surgery. Consistent patient follow-up at standard intervals after surgery will provide reassurance for patients as they recover. For plastic surgeons working in an institution, integrating patient follow-up with neurology and pain management, if needed, allows for more comprehensive care and is encouraged to promote continued collaboration.

Advocacy

When starting a headache surgery practice, it is important to create awareness about the treatment option and highlight the positive results following surgery. A multimodal approach to create this awareness can be formed through websites, social media platforms, and local news stations. Especially for surgeons working in private practice, a website devoted specifically to headache surgery is critical to differentiate them into surgeons who are truly invested and interested in treating patients with HDs. Therefore, one must truly be committed to this patient population. Engagement on various social media platforms will build bona fides and grow an audience who are likely to become patients or will know patients who could benefit from the services.

Furthermore, building a headache surgery practice specifically in an academic setting allows for the unique opportunity of training residents in these procedures. Exposure to such surgeries during residency will allow for gradual expansion of practice as trainees graduate and move to other institutions.

Coding and insurance

The current stance of insurance companies toward headache surgery is constantly evolving, varying based on insurance company policy and geographical location. In most cases, the preauthorization process for headache surgery is tedious owing to unfamiliarity with the effectiveness of the procedure amongst insurers. This necessitates provision of preauthorization letters coupled with the ASPS

Migraine Surgery Statement as leverage for coverage.^{10,23} Efforts to advocate for insurance approval of the procedure through the ASPS and MSS are ongoing. As the HD treatment option becomes more common, each headache surgery practice should also advocate for treatment coverage by the various insurers. Furthermore, understanding the appropriate Current Procedural Terminology codes for these procedures is essential. The CPT codes are summarized in the ASPS Insurance coverage criteria and in other published references.^{10,21,23} In addition, taking coding courses and familiarizing oneself with the coding principles can be helpful. We also recommend having out of pocket packages, similar to cosmetic surgery, available to patients as a last resort.

Research

One of the most exciting aspects of developing a headache surgery practice is the opportunity for research. Clinical and lab-based studies are necessary to demonstrate the increasing efficacy of techniques and facilitate insurance approval, improve surgical procedures, reduce associated risks, and better understand the basic physiology of various HD presentations. A straightforward step that most surgeons should take is to establish a patient registry. A detailed registry of patients that captures symptoms at presentation, prior workup, attempted treatments, examination findings, and ultimately, and operative technique and outcomes will allow for advancing the field of headache surgery. At the academic institutions included in this article, patients provide consent for participation in a REDcap established registry where data are accrued through patient-answered questionnaires, pain sketches, neurology, and/or primary care documentation. A comprehensive database can further bolster relationships and give rise to a multi-disciplinary collaborative approach across specialties for treating these patients.

Be persistent

Peripheral nerve surgical patients require a considerable amount of time and attention both pre-operatively and postoperatively, but they are also the most grateful patients once their symptoms improve. Thus, persistence is important because as with any new endeavor in clinical practice, there will likely be a lead-up time and growth or learning curve that may last 12- to 18-months before showing results. Therefore, diligence, especially in the face of headwinds and roadblocks from insurers and community physicians, is essential for ultimate success.

Conclusion

In this report, we present key pillars in developing a headache surgery practice based on the authors' personal experience at academic institutions and private practices. With this article, we aim to motivate plastic surgeons to pursue a headache surgery practice.

Conflicts of interest

None.

Funding

None.

Acknowledgements

None.

Ethical approval

Not required.

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